

1. (Currently Amended) A method for automatically configuring a HART multidrop system, the system including a master device and a plurality of slave devices coupled to the master device, each of the plurality of slave devices having a respective unique identifier, the method comprising the steps of:

connecting the slave devices to the master device via a two-wire line;
switching on a power source of the master device for the slave devices;
transmitting a HART command "Write polling address" as a broadcast command from the master device to the plurality of slave devices over the two-wire line with a polling address not equal to zero, the HART command being preprogrammed to cause the slave devices to (i) automatically switch to a multidrop mode and (ii) obtain an identical address not equal to zero;
determining a respective unique address for each of the plurality of slave devices;
and
transmitting a further HART command "Write polling address" from the master device to each slave device of the plurality of slave devices over the two-wire line with the respective unique address determined for the respective slave device, wherein the respective slave device is addressed by the respective unique identifier, the further HART command is preprogrammed to ~~changing~~ change the identical addresses address for the respective slave devices to [[a]] the respective unique address for each respective slave device.

2. (Currently Amended) A method for automatically configuring an existing HART multidrop system, the system including (I) a master device, (ii) a plurality of slave devices connected to the master device and (iii) at least one further slave device, each of the plurality of slave devices having a respective unique identifier, the method comprising the steps of:

connecting the at least one further slave device to the master device via a two wire line;
switching off a power source of the master device for the slave devices if the power source is switched on;

switching on the power source for the slave devices;
transmitting a HART command "Write polling address" as a broadcast command
from the master device to the plurality of slave devices over the two-wire
line with a polling address not equal to zero, the HART command being
preprogrammed to cause the slave devices connected to the master device to
(i) automatically switch to a multidrop mode and (ii) obtain an identical
address not equal to zero;
determining a respective unique address for each of the plurality of slave devices;
and
transmitting a further HART command "Write polling address" from the master
device to each slave device of the plurality of slave devices over the two-
wire line with the respective unique address determined for the respective
slave device, wherein the respective slave device is addressed by the
respective unique identifier, the further HART command is
preprogrammed to ~~changing~~ change the identical addresses address for the
respective slave devices to ~~[[a]]~~ the respective unique address for each
respective slave device.

3. (Original) The method according to claim 2, further comprising:
before the switching off step, checking if one of a supply voltage and a supply
current for the slave devices is about zero.
4. (Original) The method according to claim 2, wherein the switching on is
performed after a predetermined time interval after the switching off step to ensure that
one of a voltage and a current is not applied to the slave devices before the power source
for the slave devices is switched on.
5. (Original) The method according to claim 2, wherein, in the HART command, the
polling address has a value between 1 and 15.

6. (Original) The method according to claim 2, wherein in one of the transmitting step and the changing step, the unique address between 1 and 15 is entered for each slave device by an operator in an inquiry routine.
7. (Original) The method according to claim 6, wherein, before entering of the unique address for a particular slave device, it is determined if the particular slave device has already been configured and, if the particular slave device has been configured, the same unique address is again assigned to the particular slave device.
8. (Original) The method according to claim 7, wherein the HART command is transmitted with an identifier for the particular slave device and a previously assigned address.
9. (Previously Presented) The method according to claim 7, wherein, in addition to entering of the unique address for the particular slave device, an identifier corresponding to the particular slave device is entered.
10. (Original) The method according to claim 9, wherein the identifier is a serial number of the particular slave device.
11. (Currently Amended) A HART multidrop system, comprising:
 - a plurality of slave devices, each of the plurality of slave devices having a respective unique identifier; and
 - a master device having a power source for the slave devices, the slave devices being coupled to the master device via a two-wire line; and
 - a control unit switching on the power source to automatically configure the HART multidrop system; [[and]]wherein the master device transmits a HART command "Write polling address" as a broadcast command to the plurality of slave devices over the two-wire line with a polling address not equal to zero, the HART command causing each of the slave devices connected to the master device to be

automatically switched to a multidrop mode and receive an identical address not equal to zero, ~~the identical addresses for the slave devices capable of being changed to individual addresses for each of the slave devices~~

wherein a respective unique address for each of the plurality of slave devices is determined; and

wherein the master device transmits a further HART command "Write polling address" to each slave device of the plurality of slave devices over the two-wire line with the respective unique address determined for the respective slave device, wherein the respective slave device is addressed by the respective unique identifier, the further HART command being preprogrammed to change the identical address for the respective slave device to the respective unique address for each respective slave device.

12. (Original) The HART multidrop system according to claim 11, wherein, before the power supply is switched on, the control unit checks if one of a supply voltage and a supply current for the slave devices is about zero.

13. (Previously Presented) The HART multidrop system according to claim 11, wherein the control unit is programmed to switch on the power supply at a predetermined time interval after a switching off process, thus ensuring that one of a voltage and a current is not applied to the slave devices before the power supply is switched on.

14. (Original) The HART multidrop system according to claim 11, wherein the control unit runs an inquiry routine allowing an operator to enter a unique address of between 1 and 15 for each slave device.

15. (Previously Presented) The HART multidrop system according to claim 14, wherein, before the unique address is entered for a particular slave device, the control unit runs a checking routine to determine if the particular slave device has already been

configured, and wherein if the particular slave device has been configured, the same unique address is assigned to the particular slave device.

16. (Previously Presented) The HART multidrop system according to claim 15, wherein the checking routine involves the HART command being transmitted with an identifier for the particular slave device and a previously assigned address.

17. (Previously Presented) The HART multidrop system according to claim 14, wherein an identifier characterizing a particular slave device is entered together with the unique address for the particular slave device.

18. (Previously Presented) The HART multidrop system according to claim 17, wherein the identifier characterizing the particular slave device is a corresponding serial number of the particular slave device.

19. (Original) The HART multidrop system according to claim 11, wherein, before switching on the power source, the power source is switched off.